

## Seven new combinations for Western Australian members of Myrtaceae tribe Chamelaucieae

**Barbara L. Rye and Malcolm E. Trudgen**

Western Australian Herbarium, Department of Environment and Conservation,  
Locked Bag 104, Bentley Delivery Centre, Western Australia 6983

### Abstract

B.L. Rye & M.E. Trudgen. Seven new combinations for Western Australian members of Myrtaceae tribe Chamelaucieae. *Nuytsia* 22(6): 393–398 (2012). The following new combinations are made for Myrtaceous species in the tribe Chamelaucieae: *Anticoryne ovalifolia* (F.Muell.) Rye, *Cyathostemon ambiguus* (F.Muell.) Rye & Trudgen, *C. blackettii* (F.Muell.) Rye & Trudgen, *C. heterantherus* (C.A.Gardner) Rye & Trudgen, *Malleostemon decipiens* (W.Fitzg.) Trudgen, *Tetrapora floribunda* (Benth.) Trudgen & Rye and *T. tenuiramea* (S. Moore) Trudgen & Rye. The type gatherings for the base name *Baeckea floribunda* Benth. are discussed.

### Introduction

New combinations are made for seven south-western Australian species belonging to four genera of the large tribe Chamelaucieae DC. of the family Myrtaceae. Revisionary studies of these four genera, *Anticoryne* Turcz., *Cyathostemon* Turcz., *Malleostemon* J.W.Green and *Tetrapora* Schauer, are unlikely to be completed for some time. In the meantime, publication of the new combinations will allow the seven species to be placed with their closest named relatives rather than under *Baeckea* L. *s. lat.* or *Astartea* DC. *s. lat.* They are all compared with the named species that show the greatest morphological similarities to them.

### New combinations

***Anticoryne ovalifolia*** (F.Muell.) Rye, *comb. nov.*

*Harmogia ovalifolia* F.Muell., *Fragm.* 2: 32 (1860); *Baeckea ovalifolia* (F.Muell.) F.Muell., *Fragm.* 4: 72 (1864); *Babingtonia ovalifolia* (F.Muell.) F.Muell., *Fragm.* 4: 185 (1864). *Type*: Barren Ranges, Western Australia [precise locality withheld for conservation reasons], *s. dat.*, *G. Maxwell s.n. (holo: MEL 72889; possible iso: MEL 76240).*

*Illustration.* M.G Corrick, B.A. Fuhrer & A.S. George, *Wildfl. Southern W. Austral.*, p. 112, Figure 326 (1996) [as *Baeckea ovalifolia*].

*Distribution and habitat.* Known from a small area within the Fitzgerald River National Park, recorded on quartzite rocky slopes and on granite.

*Phenology.* Flowers mainly August to November.

*Conservation status.* Recently listed as Priority Two under Department of Environment and Conservation (DEC) Conservation Codes for the Western Australian Flora (M. Smith pers. comm.). This species is geographically restricted but is protected in a national park. It has been established in cultivation.

*Affinities.* The only other member of the genus *Anticoryne*, the type species *A. diosmoides* Turcz., differs in having broader leaves with short broad laciniae around the margin, less prominently ridged outer sepals and more numerous stamens.

*Notes.* In Mueller (1864), this species is briefly referred to as *Baeckea ovalifolia* in a note on page 72 and the index on page 185, but as *Babingtonia ovalifolia* on pages 74 and 186, resulting in two new combinations for it in the same publication. Apparently Mueller preferred the former combination as he described 15 very varied new species all under *Baeckea s. lat.* in that publication. See the notes under *Cyathostemon ambiguus* (F.Muell.) Rye & Trudgen regarding the type collector, George Maxwell.

***Cyathostemon ambiguus* (F.Muell.) Rye & Trudgen, *comb. nov.***

*Astartea ambigua* F.Muell., *Fragm.* 2: 32 (1860); *Baeckea ambigua* (F.Muell.) Nied., in A. Engler & K. Prantl, *Nat. Pflanzenfam.* III, 7: 99 (1893). *Type:* ‘East Mt Barren et Phillips Range’, Western Australia, *s. dat.*, *G. Maxwell s.n. (holo: MEL 2200764).*

*Illustration.* W.E. Blackall & B.J. Grieve, *How Know W. Austral. Wildfl.* 3A: 67 (1980) [as *Astartea ambigua*] – an apparently accurate illustration of *Cyathostemon ambiguus*.

*Distribution and habitat.* The typical variant occurs in the vicinity of Fitzgerald River National Park and forms part of a complex that is widespread in a variety of sandy or rocky habitats along the south coast of Western Australia between the Stirling Range and Israelite Bay.

*Phenology.* Flowers mainly August to October.

*Conservation status.* Numerous specimens over a wide area have been identified as this species but the great variation found within this material needs further assessment to determine how widespread the typical variant is and what status should be given to the other variants.

*Affinities.* Very similar to *Cyathostemon tenuifolius* Turcz. and *C. blackettii* (F.Muell.) Rye & Trudgen, differing from the former in its broader leaves and more numerous ovules, and from the latter in its narrower leaves that are about as thick as they are wide. All three species are included in the key in Blackall and Grieve (1980) and *C. ambigua* keys out correctly on page 67, although the other two species [as *Baeckea tenuifolia* and *B. blackettii*] should also have been keyed there instead of on pages 69 and 70 as they too have the stamens united.

*Notes.* The type specimen of *Cyathostemon ambiguus* was collected by George Maxwell, probably in the mid to late 1860s, perhaps on the same expedition as when he collected the type specimen of

*Anticoryne ovalifolia*. Maxwell had begun his botanical excursions in December 1846, when he joined James Drummond on a plant collecting trip to the Stirling Range and West Mt Barren, the specimens from that excursion forming part of Drummond's Fourth Collection (Erickson 1969).

***Cyathostemon blackettii*** (F.Muell.) Rye & Trudgen, *comb. nov.*

*Baeckea blackettii* F.Muell., *Fragm.* 8: 181–182 (1874). *Type*: in the vicinity of Point Malcolm, Western Australia, May 1870, *J. Forrest s.n. (holo: MEL 72551; iso: PERTH 03351491)*.

*Illustrations*. W.E. Blackall & B.J. Grieve, *How Know W. Austral. Wildfl.* 3A: 70 (1980); J.R. Wheeler, N. Marchant & M. Lewington, *Fl. South West* 2: 689 (2002) [both as *Baeckea blackettii*].

*Distribution and habitat*. Extends from Ongerup and Pallinup River east to near Mt Ragged and the vicinity of Point Malcolm, in a great variety of habitats, from rocky hills to low-lying areas surrounding salt lakes, often in *Eucalyptus* woodlands or mallee tall shrublands or in vegetation dominated by *Melaleuca* species.

*Phenology*. Flowers August to October.

*Conservation status*. This species is fairly common and its distribution is about 500 km long.

*Affinities*. Very similar to *Cyathostemon tenuifolius* and *C. ambiguus* but differing from both species in its broader, more flattened leaves.

*Notes*. This species is treated as having free stamen filaments in the key on page 70 of Blackall and Grieve (1980) [as *Baeckea blackettii*], although the illustration includes the comment 'lower part of filaments  $\pm$  connate'. *Cyathostemon blackettii* should actually be keyed out as having united stamen filaments on page 67.

***Cyathostemon heterantherus*** (C.A.Gardner) Rye & Trudgen, *comb. nov.*

*Astartea heteranthera* C.A.Gardner, *J. Roy. Soc. Western Australia* 13: 65–66 (1927). *Type*: near Wongan Hills, Western Australia, 5 August 1925, *E.H. Ising* 16 (*holo: PERTH 01605100; iso: AD 966021229 & 96603676*).

*Illustrations*. W.E. Blackall & B.J. Grieve, *How Know W. Austral. Wildfl.* 3A: 67 (1980); C.A. Gardner, *op. cit.*, pl. 27 [both as *Astartea heteranthera*].

*Distribution and habitat*. Occurs in the Western Australian wheatbelt from Canna south-east to near Mt Madden. Found in varied habitats, often with yellow sandy or gravelly soils or on lateritic ridges, also recorded on granite, in closed or open shrublands and mixed heath, the dominant species often including *Acacia*, mallees and *Allocasuarina*.

*Phenology*. Flowers June to September.

*Conservation status*. This species is fairly common and its distribution is about 600 km long.

*Affinities.* This distinctive species does not appear to be particularly closely related to the three other named species now placed in *Cyathostemon* but is similar to them in many respects, such as in its stamen number and arrangement, filament shape and anther morphology. Its distinguishing characters include the somewhat glaucous coating on its hypanthium, and its largely inferior rather than largely superior fruit.

*Notes.* At a locality near Caron this species (voucher *B.L. Rye* 239094 & *M.E. Trudgen*) was observed to produce adventitious roots from horizontal stems, but this growth form was not found at any other localities examined in the current study.

***Malleostemon decipiens*** (W.Fitzg.) Trudgen, *comb. nov.*

*Baeckea decipiens* W.Fitzg., *J. Western Australia Nat. Hist. Soc.* 2(1): 20 (1904). *Type:* Mingenew area, Western Australia [precise locality withheld for conservation reasons], September 1903, *W.V. Fitzgerald s.n. (holo: NSW 498038; iso: PERTH 08245657 & 08245932).*

*Illustration.* W.E. Blackall & B.J. Grieve, *How Know W. Austral. Wildfl.* 3A: 70, 76 (1980) [as *Baeckea decipiens*].

*Distribution and habitat.* Occurs in the Mingenew area, in vegetation dominated by *Melaleuca*, *Acacia* or *Allocasuarina*, sometimes on breakaways.

*Phenology.* Flowers August to October.

*Conservation status.* Listed by Smith (2012) as Priority One under DEC Conservation Codes for Western Australian Flora, under the name *Baeckea decipiens*. This species is geographically restricted.

*Affinities.* A quite distinctive species, differing from most of the named species of *Malleostemon* in that it lacks antipetalous stamens. It is similar to *Malleostemon tuberculatus* (E.Pritz.) J.W.Green in having five antisealous stamens, but differs in many characters. For example *M. decipiens* has a lower, more spreading habit and its leaves have an apical point less than 0.3 mm long, whereas the leaves of *M. tuberculatus* have an apical point 0.7–1.2 mm long.

***Tetrapora floribunda*** (Benth.) Trudgen & Rye, *comb. nov.*

*Baeckea floribunda* Benth., *Fl. Austral.* 3: 87 (1867). *Type:* Swan River Colony [north and east of Bolgart and Stirling Range to King George Sound and Cape Riche, Western Australia, 1843–1844], *J. Drummond* 3: 37 (*syn:* KW *n.v.* (photograph seen: PERTH 07523246), MEL 72744, NSW 139892 (ex BM), PERTH 01605550). Swan River Colony, [Western Australia], *s. dat.*, *J. Drummond* 138 (*syn:* K 000567181, K 000567182, MEL 72743, NSW (ex BM)). Swan River Colony, [Western Australia], *s. dat.*, *J. Drummond* 9 (*possible syn:* MEL 72742 = *Scholtzia drummondii* Benth.).

*Illustrations.* W.E. Blackall & B.J. Grieve, *How Know W. Austral. Wildfl.* 3A: 78 [as *Baeckea floribunda*]; drawings on *C.A. Gardner s.n.* Aug. 1928 (PERTH).

*Distribution and habitat.* Well represented in the Wongan Hills area, its full range not certain but apparently extending from near Morawa south-east to the Northam area and possibly to Kukerin or Ongerup, commonly occurring on sand.

*Phenology.* Flowers August to October.

*Conservation status.* This species does not appear to be at risk at present.

*Affinities.* Most similar to *Tetrapora glomerata* Turcz. and *T. preissiana* Schauer, differing in its more numerous stamens and also tending to have more numerous ovules. It is also similar to *T. tenuiramea* (S.Moore) Trudgen & Rye (see the differences listed under that species below).

*Typification.* Two of the three Drummond gatherings cited by Bentham (1867) (*J. Drummond* 138 and *J. Drummond* 3: 37) conform to our present understanding of the species; however, we have viewed a single sheet of *J. Drummond* 9 (MEL 72742) which corresponds to *Scholtzia drummondii*. It seems highly unlikely that Bentham would include a specimen of *S. drummondii* under his concept of *B. floribunda*. The MEL material does not appear to have been used by Bentham to describe this species and, given the confusion and inaccuracies in some Drummond numbers in *Baeckea* and related genera (see below), it is possible that MEL 72742 belongs to a different Drummond Collection from that examined by Bentham. We have not located the duplicates of *J. Drummond* 9 or *J. Drummond* 3: 37 that Bentham viewed. We have located two specimens of *J. Drummond* 138 at K (K 000567181 and K 000567182), of which the latter was part of Bentham's Herbarium and was presumably used by him to describe *B. floribunda* (although it has been annotated by him as *Tetrapora preissiana* Schauer). Whilst lectotypification may be necessary to fix the application of the name *T. floribunda*, we are unable to make an informed decision at this time since we have not viewed all of the relevant material.

*Notes.* Two possible synonyms of this species are *Baeckea leptophylla* (Turcz.) Domin and its base name *Harmogia leptophylla* Turcz. Turczaninov (1852: 330) cited two specimens for this species, *J. Drummond* 5 suppl.: 35 *ex parte* and *J. Drummond* 5 suppl.: 37. The latter specimen is possibly the same collection as one of the syntypes for *B. floribunda* (3: 37) as there appears to have been some confusion with regard to Drummond's Collection numbers. Certainly the numbers attributed to Drummond's Third Collection and his Fifth Supplementary Collection for species that are currently placed in the tribe Chamelaucieae are of a similar magnitude, with several numbers either duplicated or misapplied. The Collection numbers 3 and 5 may have been written in a similar way and hence confused.

***Tetrapora tenuiramea* (S.Moore) Trudgen & Rye, *comb. nov.***

*Baeckea tenuiramea* S.Moore, *J. Linn. Soc., Bot.* 45: 177 (1920). *Type:* Nungarin, Western Australia, c. 1916, *F. Stoward* 407 (*holo:* BM 000797542; *iso:* MEL 73058).

*Baeckea imbricata* S.Moore, *J. Linn. Soc., Bot.* 45: 178 (1920) *nom. illeg. non* (Gaertn.) Druce. *Type:* Kununoppin, Western Australia, 1916, *F. Stoward* 398 (*holo:* BM 000797538, photograph PERTH 07292619).

*Illustrations.* W.E. Blackall & B.J. Grieve, *How Know W. Austral. Wildfl.* 3A: 72, 85 (1980) [as *Baeckea tenuiramea* and *Baeckea* sp.]; drawings on *N.A. Field s.n.* 20 Aug. 1931 (PERTH) and *E.T. Bailey s.n.* Sep. 1932 (PERTH).

*Distribution and habitat.* Extends from Bencubbin south-east to near Hyden, Western Australia, on sandplains and other sandy habitats.

*Phenology.* Flowers August to October.

*Conservation status.* Not considered to be at risk.

*Affinities.* Readily distinguished by its uniformly one-flowered peduncles from the other *Tetrapora* species, which have all or most of their peduncles multi-flowered. It also differs from them in its broader leaves and larger flowers.

*Notes.* Blackall and Grieve (1980) correctly keyed this species twice, first as having ten or fewer stamens and the second time as having more than ten stamens. Stamen number varies little in this species, however, with 10–12 stamens normally present. Where Blackall and Grieve keyed it with over ten stamens, they called it *Baeckea* sp., based on *B. imbricata* *nom. illeg.*, noting that this species might prove to be conspecific with the taxon with ten or fewer stamens they called *B. tenuiramea*. We confirm that only one species should be recognised.

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